88-D-123, Security Enhancement, Pantex Plant, Amarillo, Texas

(Changes from FY 2000 Congressional Budget Request are denoted with a vertical line [|] in the left margin.)

Significant Changes

None; however, there is a correction in Section 1. The Physical Construction Complete date was erroneously listed as FY 2000 while at the same time requesting FY 2001 funding. This data sheet correctly lists the FY 2001 completion date.

1. Construction Schedule History [a]

	Fiscal Quarter				Total Estimated Cost ($000)	Total Project Cost ($000)
	A-E Work Initiated	A-E Work Completed	Physical Construction Start	Physical Construction Complete		
FY 1988 Budget Request *(Preliminary Estimate)*	1Q 1988	2Q 1992	2Q 1988	1Q 1994	109,700	114,700
FY 1989 Budget Request.	1Q 1988	2Q 1992	2Q 1988	3Q 1994	109,700	114,700
FY 1990 Budget Request	2Q 1988	2Q 1992	4Q 1988	4Q 1995	109,700	114,700
FY 1991 Budget Request	2Q 1988	2Q 1992	4Q 1988	3Q 1996	109,700	114,700
FY 1992 Budget Request	3Q 1988	3Q 1994	4Q 1988	3Q 1996	109,700	114,700
FY 1994 Budget Request	3Q 1988	1Q 1995	3Q 1990	4Q 1997	125,000	130,000
FY 1995 Budget Request	3Q 1988	4Q 1995	3Q 1990	4Q 1997	125,000	130,000
FY 1996 Budget Request	3Q 1988	4Q 1995	3Q 1990	4Q 1997	125,000	130,000
FY 2000 Budget Request	3Q 1988	3Q 1996	3Q 1990	4Q 2000	131,200	143,600
FY 2001 Budget Request *(Current Baseline Estimate)*	3Q 1988	3Q 1996	3Q 1990	2Q 2001	131,200	143,600

[a] No Construction project data sheet was included with the budget requests for FY 1993, FY 1997, FY 1998 and FY 1999.

2. Financial Schedule

(dollars in thousands)

Fiscal Year	Appropriations	Obligations	Costs
1988	5,700	5,700	69
1989	7,500	3,500	2,586
1990	5,417	2,417	3,514
1991	18,244	23,701	8,407
1992	30,000	30,692	15,042
1993	0	372	9,700
1994	20,000	1,862	10,647
1995	15,000	21,707	20,015
1996	13,400	20,992	21,886
1997	9,739	5,922	14,867
1998	0	2,786	6,568
1999	0	0	2,594
2000	3,487 [a]	7,052	11,905
2001	2,713	4,497	3,400

3. Project Description, Justification and Scope

This project identifies subprojects required to enhance the Pantex security posture.

These subprojects reflect the best security enhancement from information and emphasis known to date. The scope and priority of each subproject is subject to subsequent revision to reflect the results of further vulnerability assessments, field exercises, and inspections and management direction. This is required to assure that the results of further threat scenario analysis are considered in the actual implementation of the subprojects. The project costs reflect this.

The Production Zone (Zone 12 South), the Special Nuclear Material (SNM) Isolation Area, the Staging Area (Zone 4 West), and the general site include projects which enhance Pantex physical protection, detection alarm assessment, SNM facilities, safeguards of SNM, access control, and security training.

Each subproject includes associated site work for drainage, roads, parking, and utilities. Also included are foundations, walls, roofs, doors, windows, water, sewer, HVAC mechanical equipment, fire protection, alarms, lights, and electrical power to make it functional and satisfy general facility design requirements.

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[a] Original appropriation was $3,500,000. This was reduced by $13,000 for the FY 2000 rescission enacted by P.L. 106-113.

a. Subproject 01 - SNM Component Staging Facility

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$24,531 [a]	$0	$0	$0	$0	1st Qtr. FY 1991-2nd Qtr. FY 1998

This subproject is complete. Authorization for facility operation was issued July 1998.

b. Subproject 02 - Protected Area Enhancements

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 2,834 [a]	$0	$0	$0	$0	3rd Qtr. FY 1990-2nd Qtr. FY 1991

This subproject is complete. Key Decision 4 was issued September 1992.

c. Subproject 03 - Electronic Enhancements

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$81,183 [b]	$0	$3,487	$2,713	$0	4th Qtr. FY 1993-2nd Qtr. FY 2001

This subproject is for the replacement and enhancement of electronic security systems at the Pantex Plant. This subproject includes a Closed-Circuit Television Surveillance System, an Aircraft Detection System, and a Compartmentation and Security Alarm System Upgrade. Major systems to be included are: the Perimeter Intrusion Detection and Assessment System (PIDAS) in Zones 4 and 12, the Interior Security Alarm Systems (ISAS), the Compartmentation, and the ADS. Other systems required to support the above include: Closed-Circuit Television (CCTV) systems, telecommunications, computerized processing systems, and operator interface consoles located in the Security Command Center (SCC); and the Alternate Command Post (ACP). The other subprojects, integrated into the above security systems, are Radio Communications equipment, and procurement and installation of Positive Personnel Identification Verification (PPIV), both integrated with Security Alarm System upgrades (Argus Access Control).

This subproject is to accomplish several tasks. Upgrading and enhancing the alarm systems include the responsibility to integrate as well as to modernize. Secured radio broadcasts will add to the security effectiveness at Pantex. Following are the detailed justifications:

PIDAS: The existing PIDAS in Zones 4 and 12 have been in place for several years. Both systems have aged and are increasingly difficult to maintain. As a first line of defense against intruders into

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[a] Current TEC reflects final subproject costs.

[b] Estimated cost at project completion.

SNM areas and as a means of detecting insiders attempting to escape with stolen material, it is important for PIDAS to perform as well as possible.

ISAS: The ISAS are also several years old and are of many incompatible varieties. The ISAS will be replaced with a single integrated system providing a composite risk reduction of 2-3 orders of magnitude, a single-man-machine interface, a single maintenance program and the reliability of a redundant system.

ADS: The ADS is required in order to detect the intrusion of rotary or fixed wing aircraft into the plant. The topographical features of the Pantex Plant include flat, treeless terrain with no tall buildings. Such terrain does not inhibit low flying or landing aircraft.

Radio Communications: Construction of this activity was completed March 1998.

Compartmentation: Compartmentation provides additional protection against the outsider and reduces the risk against the insider. To the outside, Compartmentation offers another obstacle and at the very least an additional delay because each work area becomes a vault which is in a locked condition. To the insider, Compartmentation is a deterrent that makes it harder to accomplish his goal. To security, Compartmentation increases the delay time for the outsider and reduces the number of potential insiders possible in a particular area. Compartmentation also raises the number of insiders needed to accomplish successfully their goal, thus making detection of the insider easier. Compartmentation is an effective method of reducing the risks associated with the insider threat by limiting the number of personnel with access to production work areas. Independent, as well as "in-house," security analysis initiated Compartmentation, based on assessments of targets, insider vulnerability, and procedural noncompliance.

d. Subproject 04 - Central Shipping and Receiving Facility

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 5,865 [a]	$0	$0	$0	$0	3rd Qtr. FY 1992-4th Qtr. FY 1993

This subproject is complete. Key Decision 4 was issued December 1993.

[a] Current TEC reflects final subproject costs.

e. Subproject 05 - Perimeter Lighting System

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 265 [a]	$0	$0	$0	$0	3rd Qtr. FY 1994-4th Qtr. FY 1995

This subproject is complete. Key Decision 4 was issued January 1996.

f. Subproject 06 - Weapons Tactics and Training Facility

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 5,290 [a]	$0	$0	$0	$0	4th Qtr. FY 1996-4th Qtr. FY 1997

This subproject is complete. Key Decision 4 was issued March 1998.

g. Subproject 07 - Physical Training Facility

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 2,350 [a]	$0	$0	$0	$0	2nd Qtr. FY 1996-3rd Qtr. FY 1997

This subproject is complete. Key Decision 4 was issued August 1997.

h. Subproject 08 - Alternate Command Posts

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 2,550 [a]	$0	$0	$0	$0	3rd Qtr. FY 1994-4th Qtr. FY 1995

This subproject is complete. Key Decision 4 was issued October 1996.

[a]Current TEC reflects final subproject costs.

i. Subproject 09 - Upgrade Staging Magazine Headwalls

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 86 [a]	$0	$0	$0	$0	3rd Qtr. FY 1992-4th Qtr. FY 1992

This subproject is complete. Key Decision 4 was issued September 1992.

j. Subproject 10 - Isolation Area Fence Enhancement

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 2,396 [a]	$0	$0	$0	$0	4th Qtr. FY 1994-1st Qtr. FY 1996

This subproject is complete. Key Decision 4 was issued June 1996.

k. Subproject 11 - Protected Area Guard Towers

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$ 1,946 [a]	$0	$0	$0	$0	4th Qtr. FY 1994-4th Qtr. FY 1995

This subproject is complete. Key Decision 4 was issued October 1996.

l. Subproject 12 - Security Command Center Expansion

Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Construction Start-Completion Dates
$1,904 [a]	$0	$0	$0	$0	3rd Qtr. FY 1994-4th Qtr. FY 2000

This subproject will consist of two activities, facility expansion and facility renovation to the Security Command Center, Building 12-75, Computer Room.

Facility Expansion is complete. Key Decision 4 was issued October 1996.

Renovation of the existing computer room will be performed at the completion of the Pantex/Argus system cut-over.

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[a]Current TEC reflects final subproject costs.

Project Milestones

FY 1999: Electronic Enhancements subprojects:
Aircraft Detection System (ADS): Design and Procurement
Perimeter Intrusion Detection & Assessment System (PIDAS): Complete system Cut-Over
Interior Security Alarm System (ISAS): Start System Cut-Over
Compartmentation: Start System Cut-Over
Positive Personnel Identification and Verification (PPIV): Start-up of booths located at Station A, B, 20, 26, 28, 30, 88 and Gate MW-20

FY 2000: Electronic Enhancements subprojects:
Interior Security Alarm System (ISAS): Complete System Cut-Over
Compartmentation: Complete System Cut-Over
Aircraft Detection System (ADS): Start-up

FY 2001: Renovation of Existing Computer Room
Clean-up and Complete All Remaining
Software/Hardware Issues Associated With Argus
Clean-up and Address All Remaining Problems Associated with ADS Start-up and Operations
Complete Project

4. Details of Cost Estimate

(dollars in thousands)

	Current Estimate	Previous Estimate
Design Phase		
Preliminary and Final Design costs (Design Drawings and Specifications)	17,605	17,605
Design Management costs (0.5% of TEC)	694	694
Project Management costs (0.4% of TEC)	460	460
Total, Design Costs (14.3% of TEC)	18,759	18,759
Construction Phase		
Improvements to Land	3,242	3,242
Buildings	87,431	87,431
Special Equipment	5,803	5,803
Other Structures	961	961
Utilities	2,302	2,302
Standard Equipment	1,084	1,084
Construction Management (4.2% of TEC)	5,462	5,462
Project Management (4.2% of TEC)	5,533	5,533
Total, Construction Costs	111,818	111,818
Contingencies		
Construction Phase (0.5% of TEC)	623	623
Total, Contingencies (0.5% of TEC)	623	623
Total, Line Item Costs (TEC)	131,200	131,200

5. Method of Performance

The design services (Studies, Title I, Title II, and partial Title III) will be accomplished by outside A-E firms and will be administered by the Department of Energy or the Operating Contractor (Mason & Hanger-Silas Mason Co., Inc.).

The construction services of this project will be performed by outside construction contractors operating under fixed-price, lump-sum contracts to be awarded on the basis of competitive bids. These contracts will be administered by DOE, and/or the Operating Contractor. The construction contractors will perform all work in accordance with the construction documents.

All equipment not specified to be procured and/or installed by the construction contractors will be procured and/or installed by the operating contractor (Mason & Hanger-Silas Mason Co., Inc.).

Construction Management Services will be performed by the DOE, Operating Contractor, and/or by a construction management firm under contract to DOE or the Operating Contractor.

Final connections for new security alarms, fire alarms and specific communications equipment will be accomplished by the Operating Contractor.

6. Schedule of Project Funding

(dollars in thousands)

	Prior Years	FY 1999	FY 2000	FY 2001	Outyears	Total
Project Cost						
Facility Cost						
Design	18,083	249	412	15	0	18,759
Construction	95,218	2,345	11,493	3,385	0	112,441
Total, Line item TEC	113,301	2,594	11,905	3,400	0	131,200
Total, Facility Costs (Federal and Non-Federal)	113,301	2,594	11,905	3,400	0	131,200
Other Project Costs						
R&D necessary to complete construction	172	0	0	0	0	172
Conceptual design cost	233	0	0	0	0	233
NEPA documentation costs	15	0	0	0	0	15
Other project-related costs	8,100	2,000	1,500	380	0	11,980
Total, Other Project Ccosts	8,520	2,000	1,500	380	0	12,400
Total Project Cost (TPC)	121,821	4,594	13,405	3,780	0	143,600

7. Related Annual Funding Requirements

(FY 2003 dollars in thousands)

	Current Estimate	Previous Estimate
Annual facility operating costs [a]	1,000	1,000
Annual facility maintenance/repair costs	0	0
Programmatic operating expenses directly related to the facility	1,000	1,000
Total related annual funding (operating from FY 2003 through FY 2028)	2,000	2,000

[a]Estimated life of project–25 years.